

Application No. 10/789,003

Docket No.: NY-KIT 365-US

AMENDMENTS TO THE CLAIMS

1. (currently amended) A light source unit comprising:
 - a substrate formed of a material having high heat conductivity;
 - a light emitting diode (LED) group comprising a plurality of light emitting diodes (LED's) mounted on the substrate for irradiating beam to an object;
 - a chip resistor group comprising a plurality of chip resistors mounted on said substrate in the same direction as said LED group;
 - a light emission controlling means circuit for supplying power for light emission to the LED's LED group so as to heat said substrate with heat generated simultaneously with light emission from said LED's LED group;
 - a heat generation controlling means circuit for supplying power for heat generation to said chip resistor group so as to heat heating the substrate with heat generated in said chip resistor group upon supply of power to the chip resistor;
 - temperature determining means in the form of a chip mounted on said substrate for determining a temperature of said substrate; and
 - a control unit for determining the amount of power to be supplied for light emission to said LED group by said light emission controlling circuit and for determining the amount of power to be supplied for heat generation to said chip resistor group by said heat generation controlling circuit;
 - wherincin said control unit comprises a warm-up controlling unit for warming up said LED group, and a light source controlling unit for enabling said LED group to scan said object; and
 - wherein said warm-up controlling unit is operable to provide a command to supply the maximum power for light emission said light emission controlling circuit and is operable to provide command to supply the maximum power for heat

Application No. 10/789,003

Docket No.: NY-KIT 365-US

generation until the temperature of the substrate as determined by said temperature determining means reaches a predetermined threshold.

~~warm-up controlling means for supplying a predetermined maximum power to said light emission controlling means and said heat generation controlling means at the time of startup of the light source unit until the temperature of the substrate determined by said temperature determining means reaches a predetermined threshold.~~

2. (canceled)
3. (currently amended) The light source unit according to claim 1, wherein said substrate includes a metal base, an insulating layer formed on the base, and a printed circuit formed on the top face of the insulating layer, a ~~bounding~~ bonding wiring being provided between terminals of the printed circuit and the LED's and said chip resistors being solder-fixed to the terminals of the printed circuit.
4. (original) The light source according to claim 1, wherein said plural LED's are adapted for irradiating at least three kinds of beam of red, green and blue.
5. (canceled)
6. (currently amended) The light source unit according to claim 1, further comprising ~~temperature determining means for determining a temperature of the substrate~~, a radiator thermally coupled with the substrate and a fan for feeding cooling air to the radiator[[,]] and fan controlling means operable to drive said fan when the temperature of the substrate determined by said temperature determining means has exceeded a predetermined target temperature range and operable also to stop said fan when the determined temperature falls below said target temperature range.

Application No. 10/789,003

Docket No.: NY-KIT 365-US

7. (previously presented) The light source unit according to claim 1, wherein said temperature determining means comprises a thermistor mounted on the substrate adjacent the LED.